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A FOLLOW-UP STUDY OF THE BUSINESS STUDENTS OF MAPLETON
HIGH SCHOOL, ADAMS COUNTY SCHOOL DISTRICT ONE, DENVER,
COLORADO, FOR THE YEARS 1966, 1967, and 1968.

By

Margret Demgen Allison

B.A., Colorado State College, 1966


Presented in partial fulfillment of the requirements for the degree of

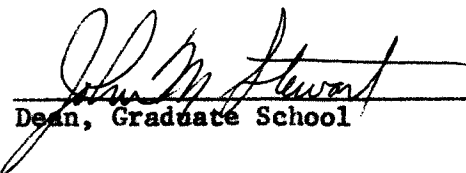
Master of Science in Business Administration

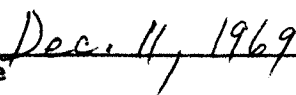
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TABLE OF CONTENTS

ACKNOWLEDGMENT

LIST OF TABLES

Chapter	Page
I. INTRODUCTION	1
Statement of the Problem	
Purpose of the Study	
Need for the Study	
Delimitations of the Study	
Definition of Terms	
II. REVIEW OF RELATED LITERATURE	9
III. METHOD OF PROCEDURE	17
IV. SUMMARY OF THE FINDINGS	19
Educational Status	
Employment	
Evaluation of the Business Curriculum	
Data Processing	
V. CONCLUSIONS AND RECOMMENDATIONS	46
Conclusions	
Recommendations	

APPENDIX

BIBLIOGRAPHY

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LIST OF TABLES

Table	Page
I. Business Students of Mapleton High School who were mailed questionnaires	18
II. Mapleton High School business students answering follow-up questionnaire	19
III. Present location of Mapleton High School business students	20
IV. Marital Status of Mapleton High School business students	21
V. Present educational and vocational status of the business students of Mapleton High School	22
VI. Mapleton High School business students who have taken college or university training since high school graduation and the major field of study pursued	23
VII. Mapleton High School business students who have taken training in an institution other than a college or university and the area of study pursued	25
VIII. Reasons why Mapleton High School business students did not complete their additional education	26
IX. Mapleton High School business students who have used their high school business training to aid in financing their additional education	25
X. Number of Mapleton High School business students employed and unemployed since high school graduation. . .	27
XI. Initial full and part-time positions held by Mapleton High School business students	28
XII. Reasons given by Mapleton High School business students for leaving initial positions	29
XIII. Methods used by Mapleton High School business students to obtain first job	30

XIV.	Employment tests taken by Mapleton High School business students to secure their first job	31
XV.	Skills and requirements of importance to Mapleton High School business students on the job	33
XVI.	Reasons given for present unemployment by Mapleton High School business students	34
XVII.	Present full-time and part-time positions held by Mapleton High School business students	35
XVIII.	Business courses taken by Mapleton High School business students	36
XIX.	Additional business courses business students believe should be offered at Mapleton High School	38
XX.	Business courses taken in high school and their value as rated by the Mapleton High School business students. .	39
XXI.	High school business courses offered that Mapleton High School business students wished they had taken during their high school career	40
XXII.	High school business courses used most by Mapleton High School business students since graduation.	41
XXIII.	Mapleton High School business students who have done work in data processing and where they received their training	43
XXIV.	Mapleton High School business students who have done work in electronic data processing since high school graduation and the type of work performed	44

CHAPTER I

INTRODUCTION

History of the School District

Adams County, School District Number One, came into being in 1903. The District was comprised of three schools. Grades one through eight were offered in each school. In 1936, the District was divided, leaving only two schools. Mapleton had four teachers and Retreat Park had three teachers.

There were 213 pupils enrolled in January, 1955, when District Sixteen united with District One. The total enrollment in the combined District was 435 pupils in grades one through eight.

In the fall of 1955, the first ninth-grade class was offered at Mapleton, and the following year a high school program was offered in grades ten through twelve. Mapleton High School graduated its first class in 1957. The graduating class numbered 35 students. In 1966 the graduating class numbered 220.

In the school year 1958-59, District One had a total of 2,889 students and 135 teachers and administrative personnel. Two schools were constructed for the 1959-60 school year which required additional employment of staff members to meet increasing student enrollment, making a total of 166 teachers and administrative personnel.

During the period from 1960 to 1962, District One continued to expand with additions to Mapleton High School and York Junior High, and

the construction of three new schools. The staff, including teachers and administrators, now exceeds 250 people; and, the total school population approximates 6,500 students. During the years included in this study, the student population at Mapleton High School was as follows: 1965-66, 910 students; 1966-67, 1010 students; and 1967-68, 860 students.

During the school year 1961-62, Mapleton High School was accredited by the North Central Association of Secondary Schools and Colleges.

School District One is similar to other Denver metropolitan districts, and will probably experience other changes and developments in keeping with the influx of population into Adams County.

Statement of the Problem

The purpose of this study is to make a follow-up of the business students of Mapleton High School for the years 1966, 1967, and 1968. This is being done in an attempt to determine how successful the business curriculum has been in providing adequate education for post-graduate employment.

Technology has made its influence felt in the commercial field just as it has revolutionized industrial processes. It is important, therefore, that education keep in touch with modern business methods so that students may learn the latest skills and techniques to fit them into job opportunities which require them. This implies an alertness to change on the part of the schools. Teachers need to know what modern business demands from employees.¹

¹Pittsburgh, Pennsylvania Public Schools Report: "Survey of Office Duties and Employer Recommendations for Improved High School Training," Pittsburgh Schools, XXIII (September-October, 1948), p. 1.

Purpose of the Study

The primary purposes of this study are as follows:

1. To determine the types of duties that business students are performing on their present jobs and to what extent the school has prepared them for these duties.
2. To determine the strengths and weaknesses of the business curriculum in providing vocational training.
3. To obtain information as to what percent of the business students are working in the various areas of electronic data processing.
4. To provide information for the administration and instructional staff to aid in updating and improving the business curriculum.

Other objectives of the study are as follows:

1. To obtain general information about the business students.
2. To determine additional education undertaken by the business students.
3. To determine how the business students obtained their first job.
4. To determine duties most frequently performed by the business students.
5. To determine what high school business course(s) were of most value and of least value to the business students.
6. To ask the business students for opinions and suggestions as to what courses should be added to the business curriculum.

Need for the Study

The structure of business education has changed greatly with the advent of technology and changes in man's social structure. Electronic

data processing is known to have displaced many people from their present positions and has required additional training for others. In these modern times of constant change in the business world, it seems important that business educators adequately prepare their students. It also seems important that business educators evaluate their curriculum in an attempt to determine whether the business students are adequately prepared for work in business and industry.

Concerned with the vocational aspects of the business curriculum, William Selden States:

The success of a program of business education is determined by the vocational competence of the students who graduate from this department. In the eyes of the community, the success or failure--of the entire school system may be based on the work performance of the boys and girls who graduate from the business curriculum.²

In order for the business curriculum offered at Mapleton High School to meet the needs of its students and the business community, it is necessary to evaluate the program by questioning previous business students to determine how the present curriculum has met their needs. One technique that can be used to examine the graduates is the follow-up study.

Kathryn M. Iliff made the following statement concerning the follow-up study:

In the simplest terms, a follow-up study is an attempt to evaluate the business education curriculum through a detailed examination of its product--the graduates. The follow-up study, with all its limitations, may result in a worthwhile, small-scale

²William Selden, "Is Business Education Vocational Education," Business Education World, XXXXI, (April, 1961), p. 30.

contribution to business education if carefully and systematically conducted. Although the conclusions drawn and the recommendations offered will, in many instances, be applicable only to a single institution, nevertheless, the values realized may be of more practical worth than studies of wider scope.³

The graduates of a high school greatly affect the school's reputation. For this reason, the students must attain proficiency in business knowledges and skills for job placement, so that they, the school, and the community can benefit.

Herbert A. Tonne states the following concerning placement and follow-up:

Placement and follow-up are basic to vocational business education. Without these procedures, job training is likely to be sporadic and its results, good or bad, a matter of chance.

Under most conditions it is desirable that placement and follow-up be provided by a special service in the school system, or by an outside agency closely connected with the school. If such service is not available, it is the function of the business teacher to provide it.

After the student has been placed on the job, it is the function of the school to make certain that the student is efficient as an initial worker. It should also identify possible inefficiencies in training and utilize them as a basis for improving the program of training in the school. If the school can provide specific supplementary training that will make the worker definitely more efficient on the job, the school can encourage both the alumnus and the employer to be real supporters of the school program.⁴

³Kathryn M. Iliff, "The Follow-up Study in Business Education," The National Association of Business Teacher Education, Bulletin 66, (1957), p. 37.

⁴Herbert A. Tonne, Principles of Business Education, (New York: Gregg Publishing Division, McGraw-Hill Book Company, Inc., 1961), pp. 526-527.

Forkner states an ideal situation which should be, at least, aimed at:

The content of the business curriculum is checked on and developed cooperatively with businessmen and former students. It is kept up-to-date by surveys and follow-up studies, and provides for all phases of business activity.⁵

Does Mapleton High School's business curriculum adequately prepare its business students for jobs in the modern business community? It appears that the majority of students who attend Mapleton High School terminate their formal education upon graduation from high school. For this reason it is important that they receive adequate training in an occupational skill in order that they are able to secure jobs in an occupation of their choice.

Paul S. Lomax states what he feels are the criteria for determining the value of education:

The educational value of what is taught in the classroom is really determined, in the final analysis, by how well students can use, in worthwhile life situations, the knowledge, skills, ideas and powers that are learned in the classroom. Follow-up studies endeavor to test the efficacy of the training in order to make improvements for the benefit of present and future students.⁶

To date, a formal study of this type has never been undertaken at Mapleton High School. In order for the business staff to justify either the present program or a need for change, it is important to determine

⁵Hamden L. Forkner, "Evaluating the Curriculum," The American Business Education Yearbook, 1951, p. 220.

⁶Paul S. Lomax, Commercial Teaching Problems, (New York: Prentice-Hall, Inc., 1928), p. 6.

the adequacy or inadequacy of the program by examining its "products." With the many purposes in mind, a follow-up study of the business students was conducted, with complete cooperation granted by the administration.

Delimitations

At the present time Mapleton High School is the only high school in Adams County School District Number One. Highland High School has been in partial operation for the past three years, but to date includes only the freshman, sophomore, and junior classes. The senior class will be added in the fall of 1969. This study is limited to those students who graduated from Mapleton High School during the years 1966 to 1968, inclusive.

The study also includes only those graduates of 1966, 1967, and 1968 who completed a minimum of two business courses. Graduates were questioned about employment since graduation but the questionnaire was limited in that it did not ask about failures the graduates had in obtaining employment.

Definition of Terms

1. Business Curriculum - Refers to all business courses offered at Mapleton High School. These courses are: Typewriting I, Typewriting II, Bookkeeping I, Bookkeeping II, Shorthand I, Shorthand II, Office Practice, General or Basic Business, Business English and Distributive Education.

2. Follow-up Study - A survey of graduates, through the use of a questionnaire, to secure factual information in order to evaluate the business courses and to improve the course offerings at Mapleton High School.
3. Business Students or Graduates - Those students who have successfully completed at least two business courses, and have been granted a diploma from Mapleton High School in 1966, 1967, or 1968.
4. Questionnaire - A list of written questions, relating to the business curriculum, with space provided for the graduates to indicate their response.
5. Products - Refers to the business students of Mapleton High School who have been surveyed to obtain the information needed for the study.

CHAPTER II

REVIEW OF RELATED LITERATURE

Many follow-up studies have been done of business students in all parts of the country. In reviewing studies that have been previously written, the writer selected surveys that were concerned with the following: the responses of graduates who had majored in business at the secondary level; surveys that included all graduates in a particular high school that had taken business subjects; and also, a survey of business teachers to determine the implications of including data processing in the high school curriculum.

Some of the studies reviewed in preparation for this study are as follows:

The purpose of the Brady⁷ study was to determine the effectiveness of the business education courses offered at Woodstock Community High School with possible recommendations for improving the business curriculum. Responses were received from 103 of the 163 graduates surveyed, which represented a 63 percent return. The following are some of the findings significant to this study: (1) The three ranking positions presently held by the graduates were housewife, secretary, and student, in that order. The other jobs held since high school

⁷Patrick T. Brady, "A Follow-Up Study of the Business Education Graduates of Woodstock Community High School From 1958 Through 1962," (Unpublished Master's Thesis, Northern Illinois University, DeKalb, Illinois, 1964).

graduation were clerk, secretary, and typist, in that order. (2) Only 20 percent of the business graduates attended college, with business education chosen as the most popular major. (3) About 40 percent of the respondents received additional on-the-job training in their present occupation. (4) Office Practice was the subject rated first in excellent preparation for its on-the-job values by the graduates. (5) The graduates felt no one influenced their decision to pursue business subjects. (6) Approximately 19 percent of the graduates requested Business English as a worthwhile addition to the business curriculum. (7) About 53 percent of the business graduates considered English as the most useful subject for its on-the-job values.

Leo Eugene Crismon⁸ conducted a study in Lehi, Utah, to evaluate the Lehi High School business curriculum in terms of the opinions and activities of the graduates from 1955 to 1964, inclusive. The study revealed: (1) A total of 98, or 80.3 percent of the graduates had been employed at least once after graduation; and 75 percent were employed in office positions. (2) Of the 67.2 percent of business graduates who attended college, 54.9 per cent studied business subjects. (3) Over 80 percent of the graduates found Typewriting I and Typewriting II to be very useful. (4) If the graduates could repeat their high school education, over 90 percent of them would take Typewriting I, Typewriting II, Shorthand I, and Office Practice. They rated the business department at Lehi High School between good and very good. (5) Business

⁸Leo Eugene Crismon, "A Follow-Up Study of the Lehi, Utah, High School Business Graduates for the Years 1955 to 1964, Inclusive," (Unpublished Master's Thesis, Brigham Young University, Provo, Utah, 1965).

courses should be made more challenging and more practical experience should be provided. (6) More stress should be placed on English and possibly a Business English course added to the curriculum.

The purpose of the Freeland⁹ study was to improve the business education curriculum at Edwardsville High School. A questionnaire was sent to graduates furthering their education after high school and graduates who took no post-high school courses. Significant findings of this study are: (1) More students should be encouraged to enroll in the business education program, particularly male students. (2) Guidance counselors, members of the business department faculty, and administrators should analyze the results of this study in an effort to improve the areas which graduates have indicated need improvement or revision.

In a study completed in Sheboygan, Wisconsin, Helming¹⁰ sent questionnaires to 114 graduates of North High School, and 92 of these graduates responded. His purpose was to determine how successful the present business education curriculum has been in providing adequate education for post-graduate employment and to obtain general and occupational information about business graduates. Some of the findings are as follows: (1) Eighty-two of the 92 respondents continued to make their home in Sheboygan. (2) Sixty-five percent of the respondents

⁹Kenneth W. Freeland, "A Follow-Up of the Business Graduates of Edwardsville High School for the Years 1960-1963," (Unpublished Master's Thesis, Southern Illinois University, Alton, Illinois, 1964).

¹⁰Roger W. Helming, "A Follow-Up Study of the Business Education Graduates from the Years 1961, 1962, and 1963 of North High School, Sheboygan, Wisconsin," (Unpublished Master's Thesis, University of North Dakota, Grand Forks, North Dakota, 1964).

sought no further education or training beyond high school. (3) Seventy-five percent of the graduates using school placement remained on their initial position. (4) Graduates receiving salaries above the median were employed in secretarial work and using shorthand. (5) Graduates indicated a need for more preparation in the use of the telephone, more study in the area of human relations, more training on the bookkeeping machine, and a need was felt for a course in business law. (6) Eighty-nine percent studying two years of shorthand had made some use of the skill; 23 percent of the Shorthand I graduates were using the skill on the job. (7) When graduates reported inadequacies in training, school records were analyzed; all reporting inadequacies had received below average or failing grades in the course.

The purpose of the Hobart¹¹ study was to determine whether the business curriculum of the Byron, Illinois, High School adequately meets the needs of graduates in initial employment. Some of the findings pertinent to this study are: (1) More graduates are employed in nonoffice (64.7 percent) than in office (35.3 percent) positions. (2) The most frequently assigned positions to the beginning office worker are typist, file clerk, and machine operator. (3) The office machine most frequently used (other than the typewriter) is the adding machine. (4) Major duties of beginning office workers are typing, bookkeeping, filing, receptionist. (5) High School courses most helpful to the graduates' occupations were office practice, typewriting, shorthand, bookkeeping,

¹¹Lois H. Hobart, "A Study of the 1960-1964 Business Education Graduates of Byron, Illinois, High School with Implications for Improving the Business Curriculum," (Unpublished Master's Thesis, Northern Illinois University, DeKalb, Illinois, 1965).

and general business. (6) Most useful courses outside the business curriculum were English and mathematics. (7) More graduates were turned down on a job because of lack of shorthand skill than for any other reason. (8) The only office machines on which high school training was adequate were manual and electric typewriters. Typewriting and filing were the most useful segments of the office practice course. (9) There is a need for training on office machines and more time should be devoted to shorthand.

The Sammataro¹² study had a dual purpose. First, to determine the adequacy of the business curriculum in relation to the business graduates' work experiences; and secondly, to make recommendations for the improvement of the business curriculum at East Haven High School. The study revealed: (1) Business graduates had received adequate preparation in the performance of major typewriting duties. (2) A greater degree of inadequacy of preparation appeared to be in the general clerical and sales areas. (3) Graduates need more training on some office machines, particularly the electric typewriter. (4) The business student's training must not end with the acquisition of specific skills. (5) The student needs to develop an understanding of his duties and responsibilities as an office worker. (6) Strengthening the level of instruction requires additional equipment and a better integration of the learnings and skills in a more realistic setting for the student.

¹²Rosemarie A. Sammataro, "A Follow-Up Study of 1962 and 1963 East Haven High School Business Graduates as a Basis for Improving the Business Curriculum at East Haven High School," (Unpublished Master's Thesis, Central Connecticut State College, New Britain, Connecticut, 1964).

In a study of a small high school in Minnesota, Haberer¹³ surveyed the entire graduating classes for the years 1959-1962, inclusive. The purpose of this study was as follows: (1) To obtain general information about the graduates. (2) To determine additional education completed by the graduates. (3) To determine the current occupational and employment status of the graduates. (4) To learn of the various machines and skills used on the job. (5) To determine what duties were most frequently performed on the job. (6) To learn what subjects the graduates considered the most valuable and the least valuable in high school. (7) To obtain the graduates opinions concerning the present business curriculum at Twin Valley, and what improvements could be made to better serve the students.

Some of the significant findings of this study were: (1) Twenty-six percent of the graduates were employed as office and store workers. (2) Over 29 percent of the graduates have had college training. (3) More than 28 percent of the graduates were using their business training to aid in financing their education in college or business college. (4) Over 80 percent of the graduates have been employed since graduation from high school. (5) The business subjects used most often on the job and listed in decending order of use were: Typewriting, business arithmetic, and bookkeeping. (6) Thirty percent of the graduates who took shorthand in high school considered it a key factor in obtaining a

¹³Richard Haberer, "A Follow-Up Study of the Graduates of Twin Valley (Minnesota) High School for the Years 1959-1962 Inclusive," (Unpublished Master's Thesis, University of North Dakota, Grand Forks, North Dakota, August, 1963).

position. (7) The four office machines used most frequently on a daily basis in order of use were: typewriter (manual), full-key adding machine, typewriter (electric), and ten-key adding machine.

In a study surveying a random sampling of business teachers in a Minnesota secondary school, M. J. Anderson¹⁴ was concerned with integrating office automation knowledge into high school business education. The purposes of this study were: (1) To determine future job opportunities for clerical employment in view of increased use of electronic business data processing machines. (2) To learn which qualifications employers seek when hiring office personnel. (3) To find what Minnesota teachers are doing in secondary business education classes to prepare students for automation in office clerical employment.

The study revealed: (1) Small, medium, and large-sized offices are using more business data processing machines to perform routine tasks efficiently and accurately. (2) The number of clerical workers has been increasing rapidly, and some believe that it will continue to increase even with automation. (3) High school students may secure positions as keypunch and verifier operator, tabulator-equipment operator, console operator, programmer, card method analyst, or computer operator without additional training in data processing. (4) While data processing courses with machines are offered in several types of schools, secondary schools are unable to offer data processing with machines at the present time due to high cost of equipment, lack of

¹⁴Mary Jane Anderson, "Integrating Office Automation Knowledge into High School Business Education," (Unpublished Master's Thesis, Mankato State College, Mankato, Minnesota, 1965).

trained teachers, lack of data processing teaching materials, and lack of time.

Many similarities and differences were quite apparent when viewing the information gleaned from the writer's study involving Mapleton High School graduates and those studies conducted at similar schools throughout the nation. The findings of these studies were recorded concisely in the earlier part of the chapter and have pertinent significance on the conclusions.

One indication in the comparison of these studies shows a definite need for the improvement of the high school business curriculum. In these studies a particular pattern seemed to persist. Typewriting was indicated as the most useful subject and shorthand was referred to as an important skill, and very necessary for employment.

A second item for over-all-consideration of this study included a need for more public human relations. For the reported data proved that most graduates were involved with people, and a definite lack of preparation in this area was apparent.

In the preparation of basic office practice, a need for more practical and varied experiences was stressed by the graduates. This, they felt would enable them to operate more efficiently in future office positions.

Definite trends have been related in the above information. The writer will attempt to relate these previously conducted studies to the study made of the business graduates of Mapleton High School.

CHAPTER III

METHOD OF PROCEDURE

The questionnaire survey method was used as the main source of information for this follow-up study. In order to collect the necessary data, the following steps were taken:

1. The study was approved by the writer's thesis committee in May of 1969.
2. A questionnaire was devised in order to gather information deemed necessary for the success of the study. A copy is included in the appendix.
3. Approval and encouragement was given to conduct a research study of this type by the Principal of Mapleton High School, Denver, Colorado, in the spring of 1969.
4. With the use of school records, a list of the graduates' names and addresses was devised.
5. A survey letter was prepared to explain the reason for the follow-up study. A copy is included in the appendix.
6. The survey letter and questionnaire were mailed to 188 business graduates on June 24, 1969. Included was a stamped and addressed return envelope. The graduates, who received questionnaires, are listed in Table I, p. 18.

7. A total of 78 returns were received from the first mailing of the letter and questionnaire. This represented a 41.5 per cent return.
8. A follow-up letter (copy in the appendix) and questionnaire were mailed on July 17, 1969, to the graduates who had not returned the questionnaire from the first mailing. A total of 46 returns were received from the second mailing. This represented an additional 24.5 per cent return. The total return was 66 per cent.
9. A deadline of August 10, 1969, was set for returns, and opinions were compiled and tabulated after that date.

TABLE I

BUSINESS STUDENTS OF MAPLETON HIGH SCHOOL
WHO WERE MAILED QUESTIONNAIRES
1966, 1967, and 1968

Year of Graduation	Number of Graduates
1966	83
1967	49
1968	56
Total Number of Questionnaires Mailed	188

CHAPTER IV

SUMMARY OF THE FINDINGS

Number Returning Questionnaires

Questionnaires were mailed to a total of 188 business students. Returns were received from 124 business students for a total of 66 per cent. A total of seven, or 3.7 per cent, of the total number of questionnaires mailed were returned by post office personnel because addresses were not current.

As indicated by Table II, below, the highest percentage of returns were received from the 1968 business students with 82.1 per cent; 1967 was second with 67.3 per cent, and 1966 had the lowest percentage of return with 54.3 per cent.

TABLE II

MAPLETON HIGH SCHOOL BUSINESS STUDENTS ANSWERING FOLLOW-UP QUESTIONNAIRES

Year	Total Mailed	Number Returned by Post Office	Total Returned	Percent Returned
1966	83	5	45	54.3
1967	49	2	33	67.3
1968	56	0	46	82.1
Totals	188	7	124	66

Location of Business Graduates

This study proved to be very informative and interesting in that only 12 out of 124 business students returning questionnaires were living outside of Colorado. This represents only 9.7 per cent of the business students. As shown in Table III, below, 108, or 87.1 per cent, of the business students are living in the Denver metropolitan area, and 112, or 90.3 per cent, are living in Colorado.

It should be noted that many of the business students may eventually move out of the state to other parts of the country, as some who gave their address as Denver were training for professions which may eventually take them out of the Denver area.

TABLE III

PRESENT LOCATION OF MAPLETON HIGH SCHOOL BUSINESS STUDENTS
1966, 1967, and 1968

Location	1966		1967		1968		Total	
	No.	%	No.	%	No.	%	No.	%
Denver, Colorado	35	77.8	32	97.0	41	89.1	108	87.1
Bennett, Colorado	---	---	---	---	1	2.2	1	.8
Erie, Colorado	---	---	---	---	1	2.2	1	.8
Henderson, Colorado	---	---	---	---	1	2.2	1	.8
Colorado Springs, Colorado	1	2.2	---	---	---	---	1	.8
Oklahoma	---	---	---	---	1	2.2	1	.8
Washington	---	---	---	---	1	2.2	1	.8
Connecticut	1	2.2	1	3.0	---	---	2	1.6
District of Columbia	1	2.2	---	---	---	---	1	.8
California	2	4.4	---	---	---	---	2	1.6
Nebraska	3	6.7	---	---	---	---	3	2.5
Minnesota	1	2.2	---	---	---	---	1	.8
Florida	1	2.2	---	---	---	---	1	.8

Marital Status of Graduates

Of the total number of business students returning questionnaires, 41.9 per cent are married (see Table IV). Of the 12 boys returning questionnaires, 3, or 25 per cent, are married, and of the 112 girls, 49, or 43.7 per cent are married. The marital status of the business students of the individual classes are: 33, or 73.3 per cent, from 1966; 8, or 24.2 per cent, from 1967; and, 11, or 23.9 per cent, from 1968.

TABLE IV

MARITAL STATUS OF MAPLETON HIGH SCHOOL BUSINESS STUDENTS
1966, 1967, and 1968

Year	Married		Percent Married	Single		Percent Single
	Male	Female		Male	Female	
1966	3	30	73.3	4	8	26.7
1967	0	8	24.2	3	22	75.8
1968	0	11	23.9	2	33	76.1
Totals	3	49	41.9	9	63	58.1

Present Status of Graduates

The present educational and vocational status of former business students is given in Table V, page 22. They are classified into eight categories: employed full-time, employed part-time, military service, housewife, operates own business, unemployed seeking work, student full-time, student part-time. The total figures do not correspond with the

total number of returns since some graduates come under two classifications. For example, some of the full-time students are also employed part-time in addition. Seven, or 17.9 per cent, of both the 1966 and 1967 graduates returning questionnaires indicated two classifications; and 16, or 34.8 per cent, of the 1968 graduates also gave the same indication.

TABLE V

PRESENT EDUCATIONAL AND VOCATIONAL STATUS OF
THE BUSINESS STUDENTS OF MAPLETON HIGH SCHOOL
1966, 1967, and 1968

Status	1966	1967	1968	Total	Percent
Employed Full-time	19	20	22	61	49.2
Employed Part-time	5	3	7	15	12.1
Military Service	2	-	-	2	1.6
Housewife	17	5	9	31	25.0
Operating own business	-	-	-	-	-
Unemployed seeking work	1	1	6	8	6.5
Student Full-time	6	5	11	22	17.7
Student Part-time	2	5	8	15	12.1

Business Students Attending Institutions of Higher Learning

For the purpose of this study, business students furthering their education were divided into two groups--those attending colleges and universities (including junior colleges) and those attending trade schools. A list of both types of institutions can be found in the appendix.

TABLE VI

MAPLETON HIGH SCHOOL BUSINESS STUDENTS WHO HAVE TAKEN COLLEGE
OR UNIVERSITY TRAINING SINCE HIGH SCHOOL GRADUATION
AND THE MAJOR FIELD OF STUDY PURSUED
1966, 1967, and 1968

Field of Study	1966	1967	1968	Total	Total Percent
Secretarial Science	3	1	5	9	18.8
Business Administration	0	1	0	1	2.1
Business Education	0	1	1	2	4.2
Data Processing	2	1	1	4	8.3
Other Teacher Education	3	4	4	11	22.9
Arts and Sciences	6	10	5	21	43.7
Total by Classes	14	18	16	48	100

Of those who had returned the questionnaires, 79, or 63.7 per cent, had received some type of formal education or training, and 45, or 36.3 per cent, had discontinued their education after high school. Of the business students who had formal education or training since high school, 58 per cent continued their education at a college or university, and 42 per cent attended some type of trade school. Table VI, page 23, lists the Mapleton High School business students who have taken college or university training, as well as their major field, since graduation. Table VII, page 25, lists the Mapleton High School business students who have taken training in an institution other than a college or university and the area of study. Some of the graduates have attended more than one type of institution and have majored in more than one field of study, so the total figures again will not correspond with the total number of graduates who continued their education after high school graduation.

Of the 79 graduates who did continue their education, 37, or 46.8 per cent, are still attending school and 42, or 53.2 per cent, are no longer attending. Of those graduates that are no longer attending school, 55.3 per cent completed their program of study, and 44.7 per cent did not finish. Table VIII, page 26, gives a list of reasons why graduates did not finish their post-secondary education.

In reply to the question as to whether the knowledges and skills acquired in the high school business subjects had helped the graduates in financing their additional education, 48, or 60.8 per cent, answered yes, and 31, or 39.2 per cent, answered no. (See Table IX, page 25).

TABLE VII

MAPLETON HIGH SCHOOL BUSINESS STUDENTS WHO HAVE TAKEN
 TRAINING IN AN INSTITUTION OTHER THAN A COLLEGE
 OR UNIVERSITY AND THE AREAS OF STUDY PURSUED
 1966, 1967, and 1968

Areas of Study	1966	1967	1968	Totals	Total Percent
Secretarial Sciences	4	4	8	16	43.2
Data Processing	5	1	1	7	18.9
Aviation Personnel	1	-	2	3	8.1
Medical Specialists	1	-	1	2	5.4
Beauticians	3	3	3	9	24.4
Total by Classes	14	8	15	37	100

TABLE IX

MAPLETON HIGH SCHOOL BUSINESS STUDENTS WHO HAVE USED THEIR
 HIGH SCHOOL BUSINESS TRAINING TO AID IN FINANCING
 THEIR ADDITIONAL EDUCATION
 1966, 1967, and 1968

Responses	1966	1967	1968	Totals	Percent
Yes	17	14	17	48	60.8
No	9	10	12	31	39.2

TABLE VIII

REASONS WHY MAPLETON HIGH SCHOOL BUSINESS STUDENTS
DID NOT COMPLETE THEIR ADDITIONAL EDUCATION
1966, 1967, and 1968

1966 Graduates

1. To go to work.
2. Military Service.
3. Quit school because of pregnancy.
4. Marriage more important than a career.
5. Got married and husband was transferred to another state.
6. To get married.

1967 Graduates

1. No financial aid.
2. To get married.
3. Lack of transportation.
4. To go to Europe and then to work on return.
5. Illness during first quarter so failed to meet academic standards.
6. Was not getting the education I wanted and highly disliked the teaching methods.

1968 Graduates

1. Was not interested in school.
 2. I was tired of going to school.
 3. Didn't like it and felt it a waste of time plus grades were not very good.
 4. Business School is not worth the money with courses I had already taken in high school. It is also too expensive. To much like a regular high school and not like a college.
-
-

Part II - Employment

This section includes the tabulation of occupational information received from the business students of Mapleton High School. Included are: The number of Mapleton High School business students employed since graduation, initial full-time positions held by business students, present full-time positions held by business students, temporary or part-time positions held by business students, methods used by business students in obtaining first job, employment tests taken by business students to secure first job, skills and requirements that have been most important to them on the job, students who are presently unemployed, and reasons for unemployment.

Table X, below, shows the number of business students that have been employed since graduation. A total of 8 business students have not been employed at any time since graduation. Of the business students who have been employed, 86, or 74.1 per cent, obtained full-time initial positions, and 30, or 25.9 per cent, held part-time initial positions. A detailed analysis of the initial full-time and part-time positions held by the business students is shown in Table XI, page 28.

TABLE X

NUMBER OF MAPLETON HIGH SCHOOL BUSINESS STUDENTS EMPLOYED
AND UNEMPLOYED SINCE HIGH SCHOOL GRADUATION
1966, 1967, and 1968

Status	1966	1967	1968	Totals	Percent
Employed	43	32	41	116	93.5
Unemployed	2	1	5	8	6.5

TABLE XI

**INITIAL FULL AND PART-TIME POSITIONS HELD BY MAPLETON BUSINESS STUDENTS
1966, 1967, and 1968**

	1966		1967		1968		Percent
	Full	Part	Full	Part	Full	Part	
<u>Business</u>							
Secretarial and General Office	8	1	8	3	6	4	25.9
Typists	10	-	3	-	6	6	21.6
Sales Personnel	5	2	6	3	2	1	16.4
Bookkeeping	2	-	2	-	3	1	6.9
I.B.M. Operators	3	-	1	-	1	2	6.0
Telephone Operators	3	-	-	-	2	-	4.3
<u>Non-Business</u>							
Waitress and Cashier	4	-	1	1	2	2	8.6
Public Service Personnel	1	1	1	1	3	-	6.0
Drafting & Printing	-	-	1	-	-	1	1.7
Maintenance	2	-	1	-	-	-	2.6
Totals	38	4	24	8	25	17	100

Reasons for Leaving Positions

Eighteen, or 14.5 per cent, of the business students are still working at their initial positions. Table XII shows a break-down of the reasons for leaving initial positions. To go to school or college and a better job were primary reasons for terminating initial employment.

TABLE XII

REASONS GIVEN BY MAPLETON HIGH SCHOOL BUSINESS STUDENTS
FOR LEAVING INITIAL POSITIONS
1966, 1967, and 1968

Reasons	1966	1967	1968	Totals	Percent
<u>For Personal Improvement</u>					
To go to school or college	6	12	12	30	30.6
To seek full-time work	-	-	3	3	3.1
For a better job	16	8	6	30	30.6
<u>Social Reasons</u>					
Moved away	7	-	2	9	9.2
Marriage	5	6	-	11	11.2
Illness	1	1	-	2	2.0
Job Inconveniences	1	3	9	13	13.3
Totals	36	30	32	98	100

Methods Used in Obtaining First Job

The business students questioned in the study were given a list of eight possible ways of obtaining employment. This was used in evaluating how first positions were obtained.

The largest percentage of positions, during all three years, were acquired by the use of the personal application, with a total of 32, or 27.6 per cent. A "friend" ranked second with a total of 25, or 21.6 per cent; however, during the year 1968 it was ranked first which is an indication of its importance. Eighteen, or 15.5 per cent received employment through an employment agency. A complete analysis of the business students responses are listed in Table XIII, below.

TABLE XIII

METHODS USED BY MAPLETON HIGH SCHOOL
BUSINESS STUDENTS TO OBTAIN FIRST JOB
1966, 1967, and 1968

Means of obtaining Employment	1966	1967	1968	Totals	Percent
Personal Application	17	7	8	32	27.6
A "friend"	7	8	10	25	21.6
Employment Agency	6	6	6	18	15.5
A Relative	8	5	4	17	14.7
School Placement	3	2	8	13	11.2
College or University	2	1	1	4	3.4
Newspaper Ad	-	2	2	4	3.4
State Employment Service	-	1	2	3	2.6

Employment Tests

Graduates were questioned as to whether they were required to take a test to secure their first job following high school graduation. Fifty-three, or 45.7 per cent, replied yes, and 63, or 54.3 per cent, replied no. Table XIV, below, shows the various types of employment tests business students were required to take. The total number of tests taken does not correspond with the total number of students taking tests, as many students took more than one test. In analyzing the replies of the business students, it was interesting to note that nearly every employment test included a typing test. Second in rank was general mathematics, with general aptitude ranking third.

TABLE XIV

EMPLOYMENT TESTS TAKEN BY MAPLETON HIGH SCHOOL
BUSINESS STUDENTS TO SECURE THEIR FIRST JOB
1966, 1967, and 1968

Tests	1966	1967	1968	Totals	Percent
Typewriting	13	7	15	35	66.0
General Mathematics	6	6	5	17	32.1
General Aptitude	5	3	4	12	22.6
English Grammar & Usage	1	2	3	6	11.3
Intelligence	4	1	1	6	11.3
Shorthand Dictation and Transcription	-	1	5	6	11.3
Spelling	4	2	-	6	11.3
Personal Oral Test	3	-	1	4	7.5
Wonderlic	2	-	1	3	5.7
Adding Machine Use	-	-	1	1	1.9
Filing	-	1	-	1	1.9
Stenotype	1	-	-	1	1.9

Skills and Requirements of Importance on the Job

Many skills and requirements are needed by graduates in order to obtain employment. A list of eleven duties were listed and the business students were to check the ones that have been most important to them. Business students were also asked to specify other skills that were important to them.

The ability to type was the skill which was most important to the majority of business students, with a total of 81, or 69.8 per cent. Fundamentals of arithmetic and filing were second, with 67, or 57.8 per cent, and legible handwriting was third with 61, or 52.6 per cent. Table XV, page 33, gives a complete summary of the business students' opinions.

Present Employment Status

The analysis of the data as to the present employment status of the business students shows that 84, or 67.7 per cent, are presently employed, and 40, or 32.2 per cent, were not employed at the time the data was collected.

Business students who were not presently employed were given a list of five reasons and were to check the reasons why they were unemployed. Marriage ranked first as the main reason for unemployment, with 27, or 67.5 per cent. Four, or 10 per cent, of the graduates were unemployed because they were looking for work. A complete analysis of the business students' responses are listed in Table XVI, page 34.

The employment status of the business students according to present full-time and part-time positions is analyzed in Table XVII, page 35. Many college students work during the summer and return to school in the

TABLE XV

SKILLS AND REQUIREMENTS OF IMPORTANCE TO MAPLETON
HIGH SCHOOL BUSINESS STUDENTS ON THE JOB
1966, 1967, and 1968

Skills & Requirements	1966	1967	1968	Totals	Percent
Ability to Type	31	18	32	81	69.8
Filing	26	16	25	67	57.8
Fundamentals of Arithmetic	22	21	24	67	57.8
Legible Handwriting	23	14	24	61	52.6
Operation of Business Machines	21	16	22	59	50.9
Telephone Techniques	23	13	23	59	50.9
English Fundamentals	22	12	21	55	47.4
Handling Mail	18	9	18	45	38.8
Bookkeeping or Record Keeping	14	7	15	36	31.0
Composing Letters	7	8	11	26	22.4
Ability to Use Shorthand	5	7	10	22	19.0
Public Relations	3	3	3	9	7.7
Computer Training & Key punch	1	1	2	4	3.4

fall. A total of 32, or 69.6 per cent, of the 1968 business students are employed. Returns from the 1967 class show that 25, or 75.8 per cent, of the business students are employed, and 27, or 60 per cent, of the business students from the 1966 graduating class are employed.

Of all the present positions now held by the business students, it appears that over 50 per cent held were in areas directly related to the training received in the business classes.

TABLE XVI

REASONS GIVEN FOR PRESENT UNEMPLOYMENT
BY MAPLETON HIGH SCHOOL BUSINESS STUDENTS
1966, 1967, and 1968

Reasons	1966	1967	1968	Totals
Married	15	5	7	27
Looking for Work	1	2	2	5
College Student	-	-	3	3
Going to Beauty School	-	-	2	2
Military Service	2	-	-	2
Working at Home	-	1	-	1
Disabled or Ill	-	-	-	-
Operates Own Business	-	-	-	-
Totals	18	8	14	40

TABLE XVII

PRESENT FULL-TIME AND PART-TIME POSITIONS HELD
BY MAPLETON HIGH SCHOOL BUSINESS STUDENTS
1966, 1967, and 1968

Position	1966		1967		1968		Percent
	Full	Part	Full	Part	Full	Part	
<u>Business</u>							
Secretarial and General Office	8	2	8	2	11	3	40.5
Typist	5	-	-	-	3	1	10.7
I.B.M. Operator	1	-	2	-	2	-	6.0
Clerk	-	-	2	1	2	1	7.1
Bookkeeping and Accounting	3	1	2	-	1	-	8.3
Management	2	-	-	-	-	-	2.4
<u>Non-Business</u>							
Waitress and Cashier	1	-	2	-	3	1	8.3
Public Service Personnel	1	-	2	-	1	1	6.0
Beauticians	-	-	2	-	2	-	4.8
Maintenance	3	-	2	-	-	-	6.0
Totals	24	3	22	3	25	7	100

Part III - Evaluation of the Business Curriculum

This section of the questionnaire was devised to obtain opinions from former business students about their high school business training. The purpose of this was to find out which courses were of most value, which were of least value, which have been used the most by the graduates, and what additional courses, which might be of value to high school business students, were recommended.

Business Courses Taken by Respondents

Table XVIII lists the business courses offered at Mapleton High School and also the number of respondents taking each course. General or Basic Business and Business English were added to the curriculum in the fall of 1967 so were not available to the 1966 and 1967 business students.

TABLE XVIII

BUSINESS COURSES TAKEN BY MAPLETON HIGH SCHOOL BUSINESS STUDENTS
1966, 1967, and 1968

Courses	1966	1967	1968	Totals	Percent
Typewriting I	45	33	46	124	100.0
Typewriting II	28	26	37	91	73.4
Bookkeeping I	25	15	27	67	54.0
Bookkeeping II	6	-	4	10	8.1
Shorthand I	28	23	29	80	64.5
Shorthand II	8	6	8	22	17.7
Office Practice (machines)	22	15	32	69	55.6
General or Basic Business	-	-	10	10	8.1
Distributive Education	10	4	3	17	13.7
Business English	-	-	21	21	16.9

Additions to the Business Curriculum

The former business students were asked to determine in what areas the business curriculum might be expanded to best serve the needs of its students. They were asked to list what course or courses, if any, should be added to the business curriculum. Table XIX, page 38, summarizes the replies.

The one course which the largest number of business students recommended be added to the business curriculum was Introduction to Data Processing. This was suggested by 20 per cent of the business students. Key Punch training was also recommended as being desirable. A total of 29 business students felt that the present curriculum was adequate and did not make a recommendation for future course offerings.

Value of the High School Business Curriculum

Table XX, page 39, indicates the value of the business courses as rated by the former business students. Each student was asked to indicate the course or courses of most value and also of least value. One hundred graduates thought Typewriting of most value, and 4 thought it to be of least value. Office Practice ranked second as being of most value to 30 graduates. Only 6 ranked it of least value. Bookkeeping was ranked third by 25 former students as being of most value, and 9 indicated it as being of least value. Two non-business courses that were mentioned as being of most value were Mathematics and English.

A total of 35 former students gave no answer to either question, and a total of 30 felt that none of the business courses were of least value, that they were all valuable in some way.

TABLE XIX

ADDITIONAL BUSINESS COURSES BUSINESS STUDENTS
BELIEVE SHOULD BE OFFERED AT MAPLETON HIGH SCHOOL
1966, 1967, and 1968

Courses	1966	1967	1968	Totals
Data Processing	12	9	11	32
Key Punch	5	4	9	18
Business Administration	4	5	3	12
Office Practice and Management	2	1	8	11
Business Correspondence	3	-	5	8
Machine Transcription	-	2	6	8
Public Relations	3	3	2	8
Business Law	1	2	4	7
Accounting	-	1	6	7
Consumer Economics	2	3	2	7
Business Mathematics and Statistics	2	2	1	5
None, Present courses adequate	11	10	8	29

TABLE XX

BUSINESS COURSES TAKEN IN HIGH SCHOOL AND THEIR VALUE
AS RATED BY THE MAPLETON HIGH SCHOOL BUSINESS STUDENTS
1966, 1967, and 1968

Courses	1966		1967		1968	
	Most Value	Least Value	Most Value	Least Value	Most Value	Least Value
Typing	35	1	24	2	41	1
Office Practice	8	1	7	1	15	4
Bookkeeping	11	3	8	1	6	5
Shorthand	4	11	8	11	8	12
Business English	-	-	-	-	5	2
Distributive Education	2	2	2	-	-	-
Basic Business	-	-	-	-	-	1
English	5	-	2	-	-	-
Mathematics	3	-	1	-	-	-
No Answer	5	12	2	8	2	6

*None, they were all valuable: 1966, 8; 1967, 9; and 1968, 13.

Additional Course Work Desired by Graduates

The former business students were also asked what business courses they wished they had taken during high school, but had neglected to do so. Bookkeeping I and II and Shorthand I and II were the classes that the majority of students had wished they had taken. A complete summary of the data can be found in Table XXI, page 40.

TABLE XXI

HIGH SCHOOL BUSINESS COURSES OFFERED THAT MAPLETON HIGH SCHOOL
BUSINESS STUDENTS WISHED THEY HAD TAKEN DURING THEIR HIGH SCHOOL CAREER
1966, 1967, and 1968

Courses	1966	1967	1968	Totals	Percent
Shorthand I	7	3	10	20	16.1
Shorthand II	5	2	5	12	9.7
Bookkeeping I	12	5	7	24	19.4
Bookkeeping II	3	7	2	12	9.7
Typing II	2	1	-	3	2.4
Distributive Education	1	2	1	4	3.2
Office Practice or Machines	6	2	3	11	8.9
Basic Business	-	2	2	4	3.2
Business English	-	-	3	3	2.4
None	12	7	14	33	26.6
No Answer	7	5	3	15	12.1

Courses Used Most by the Graduates

In the final question of Part III of the questionnaire, the business students were asked to list the business course, or courses, used most since high school graduation.

103, or 83.1 per cent, said they have used Typewriting the most. Office Practice was ranked second by 23 students, and Bookkeeping was ranked third by 21 students. Non-business courses mentioned by business students in relation to this question were: Mathematics, English, Family Living and Speech. The complete tabulation of data as it pertains to this question can be seen in Table XXII, below.

TABLE XXII

HIGH SCHOOL BUSINESS COURSES USED MOST BY MAPLETON
HIGH SCHOOL BUSINESS STUDENTS SINCE GRADUATION
1966, 1967, and 1968

Course	1966	1967	1968	Totals	Percent
Typewriting	35	28	40	103	83.1
Shorthand	4	7	7	18	14.5
Business Machines	3	-	1	4	3.2
Bookkeeping	7	6	8	21	16.9
Filing	4	1	3	8	6.5
Office Practice	6	5	12	23	18.5
Distributive Education	1	1	-	2	1.6
Business English	-	-	12	12	9.7
General Business	-	-	2	2	1.6
Mathematics	5	1	1	7	5.6
English	7	1	0	8	6.5
Family Living	1	-	-	1	.8
Speech	-	-	1	1	.8
None	1	2	2	5	4.0
No Answer	5	3	2	10	8.1

Part IV - Data Processing

Data Processing is an area of business training which has had a great deal of influence on business and industry during the past few years. It has caused a number of jobs to be eliminated, but has also created a great number of new positions. Many people who have been displaced from their positions have had to be retrained in other areas.

With this new field of work becoming more and more important, it was necessary to find out how many of the former business students of Mapleton High School had done work in the area of data processing since high school graduation. The purpose was to see if there was a sufficient number of students working in the different areas of data processing to warrant offering data processing in the high school.

Data Processing Training of Former Business Students

Students who had done work in the area of data processing were asked to specify where they had received their training. They were given four choices: college, company, business school, and on-the-job training. If they had received training elsewhere, they were to write in their reply.

A total of 24, or 19.4, per cent of the business students returning questionnaires have done work in the area of data processing. Of the 24, 10 former students received their training on-the-job. Seven received college training in data processing. Four received their data processing training at a business school and 3 attended a company training school. The analysis of data concerning data processing work and training can be seen in Table XXIII, page 43.

TABLE XXIII

MAPLETON HIGH SCHOOL BUSINESS STUDENTS WHO HAVE DONE WORK IN
DATA PROCESSING AND WHERE THEY RECEIVED THEIR TRAINING
1966, 1967, and 1968

Training	1966	1967	1968	Totals	Percent
On-the-job Training	3	2	5	10	41.7
College	2	2	3	7	29.2
Business School	3	1	-	4	16.6
I.B.M. Company	1	2	-	3	12.5
Totals	9	7	8	24	100

Jobs Performed in Data Processing by Former Business Students

The students who have worked in Data Processing were asked what type of job they performed and what type of data processing equipment they have operated. The key punch was the one piece of unit record equipment used most by the business students. A complete detail of the students' replies are presented in Table XXIV, page 45.

Business students who have done work or received training in the area of data processing were also asked to give recommendations as to what should be included in a high school Data Processing course, if such a course was added to the business curriculum. The following are the recommendations made by the business students of all three graduating classes.

DATA PROCESSING CURRICULUM RECOMMENDATIONS
OF 1966, 1967, AND 1968 BUSINESS STUDENTS

1966 Graduates

1. To give instruction on the key punch machine.
2. To teach the growing importance of data processing, the types of machines and allow students to practice on them, if possible. Also teach one of the programming languages.
3. To give instruction in the binary code of math and basic computer fundamentals.
4. To teach the basic language of the I.B.M. machines and operation of the machines.
5. To teach all card punch equipment and the basic fundamentals of control panel wiring.
6. To teach the operation of such machines as: sorter, accounting machine, calculator, computer, and also wiring for those who are interested.
7. To stress more of a variation in the different types of machines.
8. To include an introductory course in the operation of machines, for instance, the key punch, sorter, interpreter and wiring. It's important in all business classes concerning the office.
9. To teach the calculator and key punch.

1967 Graduates

1. To offer an introductory course in data processing.
2. To give instruction in unit record equipment for students who are interested and on-the-job training with companies who are interested in the schools program.
3. To offer instruction on the key punch and how to read cards.
4. To stress the study of mathematics, especially Trigonometry. Contrary to popular belief, at least Algebra I and Trigonometry are very necessary when programming in Fortran IV.
5. To offer more training on different business machines.
6. To offer a complete course of the basic skills in operating the key punch, sorter, and other machines. Then a second year advanced course.
7. To teach the collator, sorter, key punch, interpreter, etc.

1968 Graduates

1. To offer key punch training was a recommendation made by three graduates.
2. To offer an introductory course in data processing.
3. To introduce students to programming.
4. To teach the students the operation of unit record equipment.

TABLE XXIV

MAPLETON HIGH SCHOOL BUSINESS STUDENTS WHO HAVE DONE
 WORK IN ELECTRONIC DATA PROCESSING SINCE HIGH SCHOOL
 GRADUATION AND THE TYPE OF WORK PERFORMED
 1966, 1967, and 1968

Work Performed	1966	1967	1968	Totals
Key Punch	6	5	7	18
Verifier	4	3	2	9
Computer Programming	1	1	1	3
Computer Operations	3	1	-	4
Unit Record Equipment As:				
Sorter	5	2	4	11
Collator	-	1	4	5
Interpreter	2	1	2	5
Reproducer	2	-	3	5
Board Wiring	1	-	-	1
Accounting Machine	4	1	2	7

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to determine to what extent the business curriculum has met the needs of graduates in preparing them for employment, to determine the strengths and weaknesses of the curriculum, and to provide information to aid in updating and improving the business curriculum.

Conclusions

As a result of the information from the questionnaires, the following conclusions have been drawn:

The students of Mapleton High School who major in business do have the opportunity for adequately preparing themselves for a business vocation in the Denver and Metropolitan areas.

Job opportunities are sufficient to warrant including a strong secretarial and clerical program in the business curriculum at Mapleton High School, as evidenced by:

1. The large percentage of graduates who have been employed.
2. The large percentage who obtained jobs shortly after graduation.
3. The large percentage who have used their business training to help finance additional education.

A small percentage of graduates have used shorthand skills on the job.

Additional vocational guidance and placement service should be available to the students.

Students should be required to obtain job-entry-level proficiency in all business courses, as evidenced by the large percentage of business students who were required to take employment tests.

Business students should be made aware of the fact that satisfactory completion of English and Mathematics requirements are very important.

Additional training is needed in the routine duties performed in an office, such as: filing, handwriting, telephone techniques, handling mail, composing letters and public relations. This was also evident in the studies reviewed in preparation for this study.

Emphasis on typewriting and bookkeeping in the high school is justified by the frequency in which they have been used by the business students and also the value they have been to them. The importance of typewriting for vocational use as shown by the business students' responses indicates that the four semesters of typewriting that are offered at the present time are advisable in the business curriculum.

Additional training in office machines is a need of the former business students.

Former business students showed a great interest in Data Processing and approximately 30 per cent recommended that it be added to the business curriculum.

Continued emphasis should be placed on shorthand as justified by the number of graduates who now wish they had taken shorthand as part

of their high school business curriculum. This was also evident in the related studies which showed that many jobs still require the use of shorthand.

Recommendations

The recommendations presented pertain to the improvement of the business curriculum of Mapleton High School in meeting the needs of the community and the needs of the graduates.

Continuation of a strong program in business is recommended, as it appears that business students need a greater knowledge of business for personal use and as future business employees.

It is recommended that an individual trained in vocational guidance and placement be available to provide students with the knowledge of job opportunities and to assist them in securing employment upon graduation.

Consideration should be given to the addition of a Cooperative Work Experience Program so that more graduates might have experience in office work before seeking full-time employment after graduation.

It is recommended that the business department expand its course offerings to include an Introduction to Data Processing course for all students to introduce them to this area of business.

Consideration should also be given to the addition of an advanced course in Data Processing for students who would like to pursue this area further and prepare themselves for additional job opportunities in Data Processing. This course could conceivably consist of beginning programming and computer operator training.

The present bookkeeping course should have as one of its major objectives that of providing information and skills useful to bookkeeping clerks and clerical workers who use bookkeeping skills but who are not employed as full-time bookkeepers.

The instruction in office practice or machines should be continued, but routine office duties should be incorporated into the course of study to a further degree. One semester might possibly be used to learn the operation of the different machines and how they are used in an office. Also, students could prepare materials and forms that are used in an office. The second semester then could be used to apply these knowledges in a simulated office practice situation.

A survey of the occupational opportunities and requirements in the field of business in the Denver area should be conducted. The results of the survey could provide additional data in determining the needs for business training in the high school.

Research on the activities and opinions of former high school business students should be continuous as one of the means for evaluation, and possible revision, of the business curriculum.

Many of the findings of this study are quite similar to those found in the related studies which were reviewed by the writer. It is evident that there is a definite need for continued advancement in the field of business. Business Educators should continually try to upgrade their curriculum to keep up with the technical advancements of today.

APPENDIX

COLLEGES AND UNIVERSITIES ATTENDED BY MAPLETON BUSINESS STUDENTS 1966, 1967, and 1968

Institution	1966	1967	1968
Adams State College	2	1	-
AIMS Junior College	1	-	-
Colorado State College	-	2	3
Colorado State University	5	3	2
Community College of Denver	1	3	8
Dorat College	-	-	1
Metropolitan State College	1	1	1
North Park College, Connecticut	-	1	-
Northeastern Junior College	2	-	-
Phillips University	1	-	-
Southern Colorado State College	1	1	-
University of Colorado	1	2	1
University of Denver	-	1	-
Wayland Baptist College	-	1	-

APPENDIX

TRADE SCHOOLS ATTENDED BY MAPLETON HIGH SCHOOL BUSINESS STUDENTS 1966, 1967, and 1968

Institution	1966	1967	1968
Americana Beauty College	1	-	-
Barnes Business School	1	-	-
Bonton Beauty School	1	-	1
Central Business College	3	1	2
Denver Modeling School	-	1	-
Eastern Airlines School	1	-	-
Electronic-Technical Institute	1	-	-
Emily Griffith's Opportunity School	1	-	1
Frontier Airlines Training School	-	1	-
Hollywood Beauty School	-	2	1
I.B.M. School	-	2	-
Mile High Court Reporting School	-	-	1
Orchid Beauty Academy	1	-	-
Parks School of Business	2	2	7
St. Lukes School of Radiologic Technology	1	-	-
Valley Vista Beauty School	-	-	1

Mapleton High School

MAPLETON PUBLIC SCHOOLS
School District No.1, Adams County

OFFICE OF THE PRINCIPAL

601 EAST 64th AVENUE

DENVER 29, COLORADO

409 Bannack Court South
Missoula, Montana 59801
June 23, 1969

Dear Former Student:

You have been selected as one of the participants of a random sampling of business students who have been graduated from Mapleton High School, in the years 1966, 1967, and 1968.

We are very interested in what you are now doing. The information received from you will be used to evaluate and up-date the Business Department course offerings at Mapleton.

In order for this study to be successful, we need 100% cooperation. Your assistance in filling out the enclosed questionnaire may be of great importance to your school and its future students.

Please fill out the enclosed form and mail it to me in the stamped, self-addressed, enclosed envelope, as soon as possible.

Sincerely yours,

Margret D. Allison
Business Instructor

Enclosures

Mapleton High School

MAPLETON PUBLIC SCHOOLS
School District No.1, Adams County

OFFICE OF THE PRINCIPAL

601 EAST 64th AVENUE

DENVER 29, COLORADO

409 Bannack Court South
Missoula, Montana 59801
July, 1969

Dear Former Graduate:

A letter and questionnaire were mailed to you in June, asking you to evaluate the business curriculum at Mapleton High School. To date, I have not received your completed questionnaire.

In order for our survey to be successful and to help future business students, it is necessary to receive replies from each graduate.

Won't you take a few minutes to complete the enclosed questionnaire and return it at once. Your cooperation will be greatly appreciated.

Sincerely yours,

Margret D. Allison
Business Instructor

Enclosures

QUESTIONNAIRE

Mapleton High School Business Students of
1966, 1967, and 1968

NAME _____, _____ YEAR OF GRADUATION _____.
(Last) (First)

SINGLE _____ MARRIED _____ MAIDEN NAME IF MARRIED _____.

PART I - ADDITIONAL EDUCATION

1. CHECK THE FOLLOWING WHICH IDENTIFIES YOUR PRESENT STATUS:

<input type="checkbox"/> Employed Full-time	<input type="checkbox"/> Housewife	Student:
<input type="checkbox"/> Employed Part-time	<input type="checkbox"/> Operating own Business	<input type="checkbox"/> Full-time
<input type="checkbox"/> Military Service	<input type="checkbox"/> Unemployed seeking work	<input type="checkbox"/> Part-time

2. Have you had any formal education or training since graduation from high school? YES _____ NO _____

- a. If you have additional training or Education list school or institution below:

Name of College or School Attended	Type of School	Major Area of Study	Date Began	Date Ended

3. Are you still attending school? YES _____ NO _____
4. If you did not finish your schooling give your reason for leaving.

5. Have the knowledges or skills of the high school business subjects helped you in financing your education? YES _____ NO _____

PART II - EMPLOYMENT

1. Have you been employed at any time since high school graduation?
YES _____ NO _____
2. ON THE FOLLOWING PAGE, LIST THE JOBS YOU HAVE HAD SINCE GRADUATION FROM HIGH SCHOOL: (in order, beginning with first position)

	1st. Position	2nd. Position	3rd. Position
a. Name of Firm			
b. Location of Firm			
c. Type of work			
d. Full-time			
e. Part-time			
f. Time employed (Yrs., Months)			
g. Reason for leaving			

3. Show with a check mark how you obtained your first job:

<input type="checkbox"/> School Placement Service	<input type="checkbox"/> Employment Agency
<input type="checkbox"/> State Employment Service	<input type="checkbox"/> College or University
<input type="checkbox"/> Newspaper Ad	<input type="checkbox"/> A relative
<input type="checkbox"/> A friend	<input type="checkbox"/> Personal application

4. Did you have to take a test to secure your first job? YES ___ NO ___

a. If answer is yes, what type of test did you take? _____

5. What skills and requirements have been most important to you on your job?

<input type="checkbox"/> ability to type	<input type="checkbox"/> Telephone techniques
<input type="checkbox"/> Ability to use shorthand	<input type="checkbox"/> Bookkeeping or Record Keeping
<input type="checkbox"/> English Fundamentals	<input type="checkbox"/> Handling Mail
<input type="checkbox"/> Legible handwriting	<input type="checkbox"/> Composing letters
<input type="checkbox"/> Filing	<input type="checkbox"/> Operation of Business Machines
<input type="checkbox"/> Fundamentals of arithmetic	<input type="checkbox"/> Others (Please specify) _____

6. Are you presently employed? YES ___ NO ___

7. If not presently employed, check reason:

<input type="checkbox"/> Married	<input type="checkbox"/> College Student
<input type="checkbox"/> Working at home	<input type="checkbox"/> Other (Please specify) _____
<input type="checkbox"/> Disabled or ill	_____
<input type="checkbox"/> Operates own business	_____

PART III - HIGH SCHOOL CURRICULUM

1. CHECK THE BUSINESS SUBJECTS YOU HAVE TAKEN IN HIGH SCHOOL:

<input type="checkbox"/> Typing I	<input type="checkbox"/> Shorthand I	<input type="checkbox"/> Bus. English
<input type="checkbox"/> Typing II	<input type="checkbox"/> Shorthand II	<input type="checkbox"/> Distributive
<input type="checkbox"/> Bookkeeping I	<input type="checkbox"/> Office Practice	<input type="checkbox"/> Education
<input type="checkbox"/> Bookkeeping II	<input type="checkbox"/> General or Basic Business	

2. In your opinion, what additional business courses, if any, should be taught? 1. _____ 2. _____
3. What high school business course(s) has been of most value to you? 1. _____ 2. _____
4. What high school business course(s) has been of least value to you? 1. _____ 2. _____
5. What course(s) do you suggest be added to the business curriculum? 1. _____ 2. _____
6. Is there any specific business course offered, that you did not take, but wished you had taken?

7. What high school business courses have you used most since high school graduation?
1. _____ 2. _____ 3. _____

PART IV - DATA PROCESSING

1. Have you done any work in Electronic Data Processing since you graduated from high school? YES _____ NO _____
2. If you have done work in data processing, what type of work was it? (what type of machines have you operated) _____

3. Where did you receive your training in Electronic Data Processing work? (check one)

_____ College	_____ Business School	Other (specify)
_____ I.B.M. Company	_____ On-the-job Training	_____
4. Did you receive any instruction in Data Processing during your high school business training? YES _____ NO _____
5. If you have received training or have worked in the area of Data Processing, what do you think should be included in a high school Data Processing course, if such a course were added to the curriculum? _____

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